In response to the final Action of September 13, 201, please amend the above application as follows.

In the Specification

Page 5, line 16, replace the paragraph beginning there with:

To begin with, the water in the tube 2 is obtained from a water mains 16 at a pressure higher than 3 bar. Reference numeral 17 indicates a filter and reference numeral 19 a valve enabling a filling of the tube 2. The valve 19 is open when the filling of the tube 2 with water is started. After the tube has been filled, the valve 19 is closed.

REMARKS

The correction requested for the specification is made above.

The rejection under 35 USC 112, first paragraph, for subject matter not described in the specification in a way to enable one skilled in the art to make and use the invention indicates that one skilled in the art could not fill a tube with water and pressurize it. The applicant cannot accept this assessment of the skill in the art, which is based on the

Examiner's personal knowledge, because unsupported by any art citation. Therefore, the applicant must call for an affidavit as provided for by 37 CFR 1.104(d)(2), so as to be able to provide contradiction.

Moreover, Fig. 2, for example, of the application specifically shows valves (enclosed in dashed boxes without reference characters) respectively between the nitrogen gas botles 9-12 and the tube 2 that is filled with water through valve 19 as described on page 5 of the specification. These valves (enclosed in dashed boxes without reference characters in Fig. 2, for example) are obviously closed while the tube 2 is being filled through valve 19 to meet the requirements of 35 USC 112.

The rejection under 35 USC 112, second paragraph, for the use of the term "hydraulic accumulator" is traversed by the attached definition thereof from the Standard Handbook for Mechanical Engineers of 1967, i.e. known at the time the invention was made.

The rejection under 35 USC 102 for anticipation by the Naumann patent, because it "disclosed a fire fighting apparatus comprising a plurality of spray heads 25; a tube system 13; at least one drive gas source 15, 17; and release means 27," is facially insufficient. The invention

independently claimed has the "... extinguishing medium source consisting essentially of a long tube ..." as in claim 1, for example, "... whereby the long tube together with the at least one drive gas source constitutes a hydraulic accumulator," as in claim 1, for example. The rejection does not even hint that the Naumann patent discloses or suggests this.

Further, more than a hint is required.

> The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity. MPEP 706.

Furthermore, in the Naumann patent, "... container 13 is filled with the liquid to be dispensed, as for example by separating the gas compression tube 15 from the container 13 ..." as described at column 2, lines 37-39. The liquid is in the container, and not the tube, as claimed.

The rejection under 35 USC 103 for obviousness from the inventor's prior '417 patent recognizes that the patent "Sundholm differs from what is being claimed in the extinguishing medium source consisting essentially of a long tube." The applicant agrees. Therefore, the issue of patentability turns on whether this difference is obvious from the patent.

Instead of addressing the issue, the Action indicates, "It would have been obvious to a person having ordinary skill in the art at the time of the invention to have charged the device of Sundholm [the patent] so that water is filled to the inlet of the accumulators to minimize water use." Even though the patent has such disclosure, assuming disclosure as at column 2, lines 61 and 62, and column 3, lines 26-29, is referred to (see, MPEP 706, quoted above), such filling has nothing to do with replacing the accumulators with a tube and a gas source, as claimed, and, thereby, anticipating the claimed invention.

Even with this disclosure of the patent, the patent still only discloses this in combination with the accumulators 2, 10 ... 60 wherein the extinguishing medium source does not consist essentially of a long tube, as claimed. This is not enough. Contrary teachings of a reference, in this case of a combination of tube and non-tube extinguishing medium sources, does not teach a tube extinguishing medium source alone, as claimed.

MPEP 2141.02

PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would

lead away from the claimed invention, *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)

Therefore, such filling has nothing to do with making the claimed invention obvious, either.

Reconsideration and allowance are, therefore, requested.

Respectfully submitted,

William R. Evans
c/o Ladas & Parry
26 West 61st Street
New York, New York
Reg. No. 25858
Tel. No. (212) 708-1930

Marked up copy of the paragraph beginning at page 5, line 16:

To begin with, the water in the tube [1] 2 is obtained from a water mains 16 at a pressure higher than 3 bar. Reference numeral 17 indicates a filter and reference numeral 19 a valve enabling a filling of the tube 2. The valve 19 is open when the filling of the tube 2 with water is started. After the tube has been filled, the valve 19 is closed.

sign

STANDARD HANDBOOK FOR MECHANICAL ENGINEERS

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Pressure control valves, of which an ordinary safety valve is a common type (normally closed), include relief and reducing valves and pressure switches (Figs. 77, 78). Pressure valves, normally closed, can be used to control sequential operations in a hydraulic circuit. Flow control valves throttle flow to or bypass flow around the unit being controlled, resulting in pressure drop and temperature increase as pressure energy is dissipated. Figure 79 shows a simple needle valve with variable orifice useable as a flow control valve. Directional control valves serve primarily to direct hydraulic fluid to the point of application. Directional control valves with rotary and sliding spools are shown in Figs. 80 and 81.

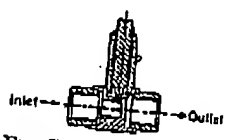

FIG. 79. Needle valve.

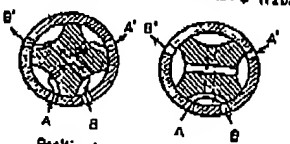

FIG. 80. Rotary-spool directional flow valve.

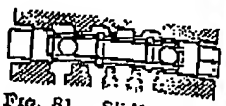

FIG. 81. Sliding-spool directional flow valve.

Accumulators are effectively "hydraulic flywheels" which store potential energy by accumulating a quantity of pressurized hydraulic fluid in a suitable enclosed vessel. The bag type shown in Fig. 82 uses pressurized gas inside the bag working against the hydraulic fluid outside the bag.

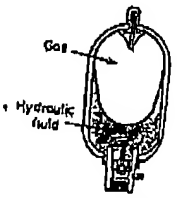

FIG. 82. Bag-type accumulator.

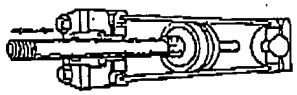

FIG. 83. Linear actuator or hydraulic cylinder.

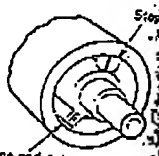

FIG. 84. Rotary actuator.

Pressurized hydraulic fluid acting against an actuator or motor converts fluid pressure energy into mechanical energy. Motors providing continuous rotation have operating characteristics closely related to their pump counterparts. A linear actuator, or cylinder (Fig. 83) provides straight line reciprocating motion; a rotary actuator (Fig. 84) provides arcuate oscillatory motion.

BRAKES

(See also Secs. 10 and 11)

Block brakes are shown diagrammatically in Figs. 85 to 89. They consist of a block or shoe of wood or cast-iron bearing upon an iron or steel wheel. The following relations obtaining in the operation of these brakes may be formulated as follows:

In Fig. 85, let F = load applied at end of lever arm; A = distance from point of application of F to block center; B = distance from block center to center of fulcrum pin; R = reaction between wheel and block; f = coefficient of friction; P = tangential frictional resistance. Then, for rotation in either direction,

$$F(A + B) = RB \qquad R = P/f \qquad \text{and} \qquad F = PB/f(A + B)$$

In Fig. 86, let C = leverage distance from fulcrum pin to line of action of P. Then, for clockwise rotation, $F(A + B) = RB + fRC$. For counterclockwise rotation, $F(A + B) = RB - fRC$.

In the case of clockwise rotation, it will be noted that C/B must be less than $1/f$, or the brake will be self-acting, *i.e.*, will bind.

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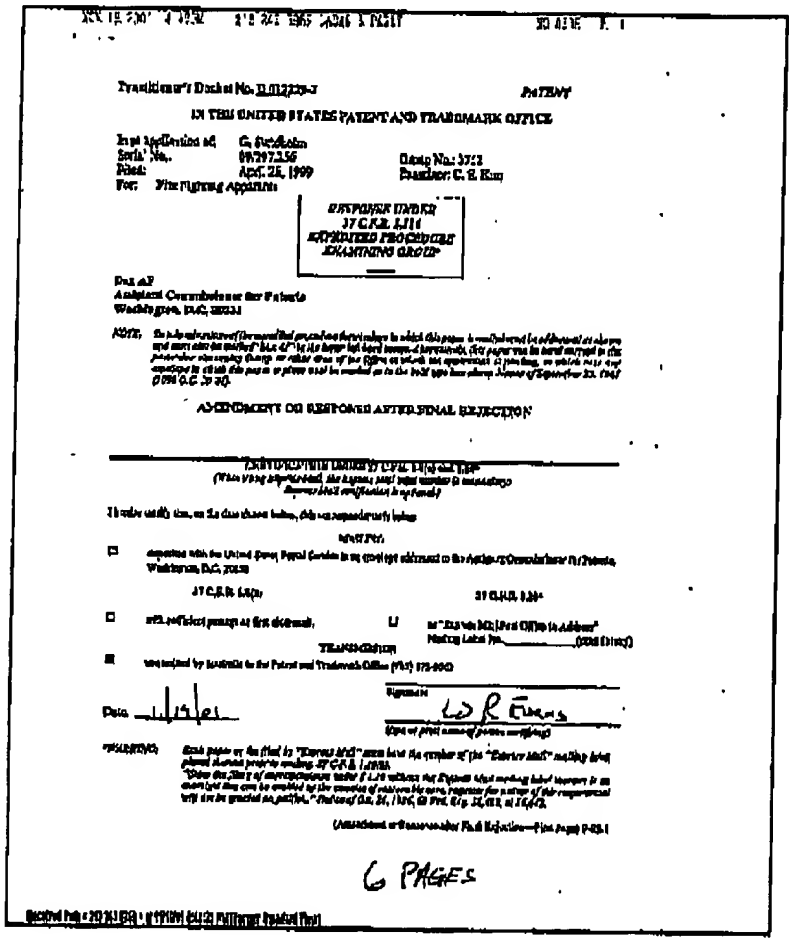

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Serial No.: 09/297,356
Filed: April 28, 1999
For: Wire Fighting Apparatus

Group No.: 3723
Examiner: C. S. Kim

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Assistant Commissioner for Patents
Washington, D.C. 20231

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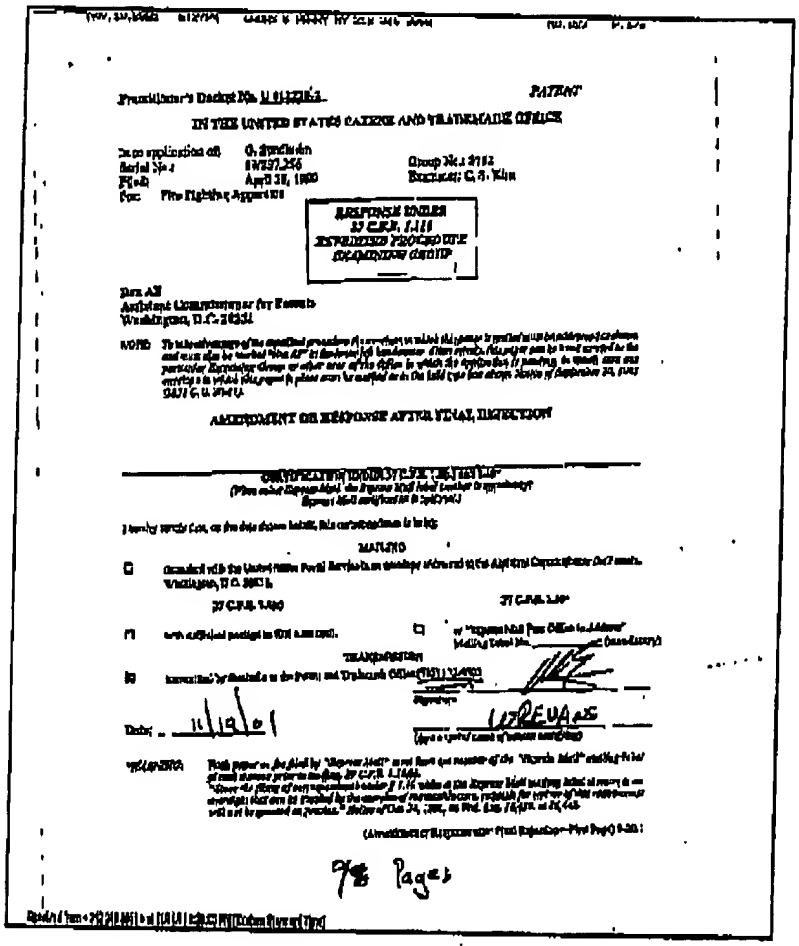

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